

WEATHER OF THE ATLANTIC AND PACIFIC OCEANS

NORTH ATLANTIC OCEAN

By F. A. YOUNG

The outstanding feature of the month was the tropical disturbance generally known as the "Santo Domingo hurricane," that is fully described elsewhere in the REVIEW. While this storm was extremely severe during the period from the 1st to 3d and on the 13th and 14th the diameter of the storm area was unusually small, and in consequence comparatively few reports were received from vessels involved. Among the vessels heavily involved was the American S. S. *Coamo*, the experience of which is narrated elsewhere in the REVIEW.

Charts VIII to X cover the period from the 1st to 3d, inclusive, and besides giving an idea of the conditions in tropical waters, also show the state of the weather encountered by the French airplane *Question Mark* during the nonstop flight from Paris to New York. The *Question Mark* left France on the 1st and arrived at Curtis Field on the evening of the 2d. In connection with this flight it is interesting to note that on the 1st the normal pressure distribution over the eastern section of the ocean was reversed. The barometric reading at Horta was 29.80 inches and at stations in the British Isles 30.37 inches. This unusual condition was responsible for strong easterly winds, reaching in some cases gale force over the eastern section of the steamer lanes. On the 2d, light to moderate winds were the rule over the greater part of the ocean, and there was considerable fog west of the fortieth meridian.

Taking the ocean as a whole, the number of days with gales was somewhat below the normal, as not more than four were reported from any 5° square. Two of the disturbances were of exceptional severity, however; the "Santo Domingo hurricane" and the storm that will be described later and which caused an immense amount of damage on the French coast on the 19th.

The number of days on which fog was reported in different localities is as follows: Over the Grand Banks, from 11 to 13 days; between the fortieth and forty-fifth parallels and sixtieth and seventieth meridians, from 14 to 15 days; over the steamer lanes east of the forty-fifth meridian, from 2 to 6 days; in the Gulf of Mexico, 2 days.

Barometric data for several island and coast stations are given in the following table:

TABLE 1.—Averages, departures and extremes of atmospheric pressure at sea level, 8 a. m. (seventy-fifth meridian)—North Atlantic Ocean, September, 1930

Stations	Average pressure	Departure	Highest	Date	Lowest	Date
	Inches	Inch	Inches		Inches	
Julianehaab, Greenland	29.89	(¹)	30.21	30th	29.62	27th.
Belle Isle, Newfoundland	29.77	−0.13	30.16	21st	29.26	24th.
Halifax, Nova Scotia	29.95	−0.10	30.34	1st	29.74	28th.
Nantucket	29.89	−0.09	30.34	1st	29.72	27th.
Hatteras	30.04	−0.04	30.30	1st	29.86	27th.
Key West	29.97	+0.01	30.10	24th	29.88	6th. ⁴
New Orleans	29.88	−0.02	30.16	1st	29.90	15th. ⁴
Cape Gracias, Nicaragua	29.85	−0.06	29.92	9th	29.80	7th. ⁴
Turks Island	30.03	+0.05	30.12	24th	29.90	10th.
Bermuda	30.09	+0.01	30.32	1st	29.94	27th. ⁴
Horta, Azores	30.08	−0.08	30.26	11th	29.82	29th.
Lerwick, Shetland Islands	29.94	+0.10	30.36	27th	29.29	20th.
Valencia, Ireland	29.93	−0.06	30.33	1st	28.58	19th.
London	29.95	−0.05	30.38	2d	29.25	20th.

¹ No normal available.

² From normals shown on Hydrographic Office Pilot Charts, based on observations at Greenwich mean noon, or 7 a. m., seventy-fifth meridian time.

³ From normals based on 8 a. m. observations.

⁴ And on other date or dates.

As stated previously, the conditions from the 1st to 3d are shown on Charts VIII to X, inclusive. On the 4th the tropical disturbance was over the Windward Passage, while over the greater part of the ocean moderate weather prevailed from this date until the 12th. Two disturbances of apparently local nature were reported in the Caribbean Sea on the 6th and 8th, respectively, as shown by notes at the end of this article.

On the 13th the position of the tropical storm is shown on the track as near 37° N., 72° W. On the same day Belle Isle was a short distance west of the center of a well-developed Low, and another depression was over the British Isles, both being accompanied by westerly to northwesterly gales. On the 14th a Low, central near 38° N., 64° W., was probably a continuation of the tropical storm; on the 15th the center was apparently near 36° N., 53° W., and on the 16th somewhere near 37° N., although its position on the latter two dates was uncertain, especially on the 16th.

On the 14th the northern Low was central near 50° N., 38° W., while moderate to strong gales prevailed over the greater part of the steamer lanes, between the 20th and 50th meridians; it then evidently recurved toward the north, as on the 15th the center was near 55° N., 33° W., while the storm area had contracted and now covered the region between the center and forty-fifth parallel, and the thirtieth and fortieth meridians.

Charts XI to XIII show the conditions from the 17th to 19th, inclusive, and give an idea of the intensity and extent of the disturbance that reached its climax on the 19th. According to press reports this was the worst storm in many years off the coast of France, and was responsible for large loss of life and property, especially among the fishermen of Brittany. On the 20th the center was near the mouth of the River Tyne on the east coast of England, and while the storm area had decreased somewhat in extent, winds of force 10 and 11 were still encountered as far south as the forty-fifth parallel.

On the 20th a second depression was over Newfoundland that moved rapidly northeastward, and on the 21st moderate to strong gales prevailed over a limited area between the thirty-fifth and fiftieth meridians. This Low was closely followed by a third that on the 23d was central near St. Johns, Newfoundland, and reached its greatest intensity on the 30th when central near 43° N., 20° W., as on this date winds of force 7 to 10 were reported between the thirty-fifth and forty-fifth parallels. From the 26th to 29th moderate gales occurred over the eastern sections of the steamer lanes, and on the 27th a number of stations on the British Isles reported northerly winds, force 7, with comparatively high barometric readings.

Notes.—*Bogota*, American steamship, captain and observer, H. M. Davis, New York to Haiti. September 4, between Castle Island and northwest coast of Haiti. Heavy wind all day with squalls reaching gale force with rain and heavy sea; both diminishing as ship approached coast of Haiti at night.

On the 6th a Pan American airplane between St. Vincent and St. Lucia reported at noon: Gale 100 miles an hour, heavy rain, no visibility. At St. Lucia, barometer 29.94 inches, wind NE., 3. German S. S. *Rhodopis*, at 8 a. m. on the 8th in 15° 45' N., 68° 40' W., heavy squalls, force 10 with heavy rain from SE., confused sea up to 10 a. m., afterwards becoming east and diminishing.

American S. S. *Dorothy Luckenback*, Capt. H. A. Lewald; observer, I. Lysted, 3d officer; from San Pedro to Philadelphia, September 4, 6.15 p. m., 19° 03' N., 74° 26' W. Observed a big waterspout 1,200 feet high.

Barometer 29.78, wind E., 4. Diameter very large, circular motion not very distinct, traveling northwestward.

OCEAN GALES AND STORMS, SEPTEMBER, 1930

Vessel	Voyage		Position at time of lowest barometer		Gale began	Time of lowest barometer	Gale ended	Lowest barometer	Direction of wind when gale began	Direction and force of wind at time of lowest barometer	Direction of wind when gale ended	Highest force of wind and direction	Shifts of wind near time of lowest barometer
	From—	To—	Latitude	Longitude									
NORTH ATLANTIC OCEAN													
K. R. Kingsbury, Am. S. S.	New York	Canal Zone	21 21 N	74 08 W	Sept. 4	5 p., 4	Sept. 4	29.89	E	SE, 7	SE	ESE, 8	E-SE-SSE.
Bannack, Am. S. S.	Cork	New York	47 31 N	49 52 W	Sept. 6	5 a., 6	Sept. 6	29.69	WSW	W, 7	SW	W, 8	WSW-W.
W. C. Teagle, Am. S. S.	New York	Aransas Pass	28 40 N	78 30 W	Sept. 10	6 p., 10	Sept. 11	29.86	S	—	SW	ESE, 8	—
Liberty Glo, Am. S. S.	Bremen	Wilmington, N. C.	35 30 N	75 10 W	Sept. 12	3 p., 12	Sept. 12	29.05	E	E, —	NW	—, 12	E-SE.
President Wilson, Am. S. S.	New York	Canal Zone	35 06 N	75 06 W	do.	8 p., 12	do.	29.13	SE	—, 12	W	SE, 12	SE-W.
Quaker City, Am. S. S.	Dundee	Philadelphia	49 28 N	47 55 W	do.	10 p., 12	Sept. 13	29.30	SSW	—, 8	W	—, 9	—
Independence Hall, Am. S. S.	New York	Havre	50 10 N	18 00 W	Sept. 13	2 a., 13	Sept. 14	29.91	NW	NW, 8	NW	NW, 9	Steady.
Okeania, Gr. S. S.	Gibraltar	Baltimore	36 28 N	60 35 W	Sept. 14	4 p., 14	do.	29.14	S	S, 10	N	S, 10	S-W-N.
Nessian, Br. S. S.	Swansea	Montreal	53 30 N	26 08 W	do.	4 a., 14	Sept. 16	29.62	SE	SE, 9	SW	SSE, 9	SSE-SW.
Naples Maru, Jap. S. S.	Newcastle on Tyne	Savannah	39 11 N	55 07 W	do.	8 a., 15	Sept. 15	29.62	E	ENE, 8	N	—, 8	—
New York, Ger. S. S.	Cherbourg	New York	45 34 N	42 08 W	Sept. 17	8 a., 17	Sept. 17	29.67	S	W, 8	N	NW, 9	S-W-NW.
Sarcosie, Am. S. S.	Bordeaux	do.	44 48 N	23 40 W	do.	8 a., 18	Sept. 23	29.49	W, 7	W, 7	NW	NW, 10	—
Ambridge, Am. S. S.	Antwerp	do.	50 16 N	12 12 W	Sept. 18	Noon, 18	Sept. 20	28.60	NNW	NNW, —	WNW	NNW, 12	S-SE-NNW.
Reventazon, Br. S. S.	Hull	Santa Marta	46 50 N	9 40 W	do.	Mdt., 18	do.	29.24	SSE	SSE, 8	NNW	SW, 10	SSE-SW-NNW.
Samala, Br. S. S.	Liverpool	Jamaica	49 05 N	13 20 W	Sept. 19	5 a., 19	do.	28.64	S	S, 9	NW	WNW, 11	—
West Cobalt, Am. S. S.	Dundee	New Orleans	47 35 N	6 55 W	Sept. 17	2 a., 19	do.	29.24	SW	WSW, 11	NW	—, 11	S-W-NW.
Arden, Am. S. S.	Black Sea	New York	42 58 N	43 00 W	do.	3 a., 20	Sept. 21	29.70	S	SW, 6	N	NW, 9	—
Saco, Am. S. S.	Rotterdam	do.	51 24 N	2 08 E	Sept. 20	4 p., 20	do.	29.28	SW	SW, 9	W	WSW, 10	SW-WSW.
Ambridge, Am. S. S.	Antwerp	do.	49 05 N	32 08 W	Sept. 22	10 a., 22	Sept. 24	29.66	NW	NW, 7	W	—, 10	Steady.
Cuba, Fr. S. S.	Habana	Corunna	42 30 N	44 30 W	Sept. 23	do.	Sept. 25	29.66	S	SSW, 8	SSE	SSW, 9	—
Emile Franqui, Belg. S. S.	New York	Antwerp	45 48 N	39 54 W	Sept. 25	Noon, 25	Sept. 27	29.53	SSE	Var. 2	SSE	SSE, 9	Steady.
Yselhaven, Du. S. S.	Bremen	Norfolk	48 32 N	32 23 W	Sept. 27	11 a., 28	Sept. 28	29.61	SE	Var. 2	Var	SE, 9	—
Western Queen, Am. S. S.	Bremerhaven	Freeport	42 50 N	23 10 W	Sept. 29	2 p., 29	Sept. 29	29.34	WSW	NW, 9	NE	NW, 9	WSW-NE.
Bogota, Am. S. S.	New York	Haiti	27 50 N	74 17 W	Sept. 30	3 p., 30	Oct. 1	29.92	SW	SW, 6	SW	—, 9	—
Nemaha, Am. S. S.	Holland	Mobile	44 14 N	22 05 W	do.	2 a., 30	do.	29.36	NE	NNE, 11	N	—, 11	Steady.
Grete, Ger. S. S.	Hamburg	Savannah	43 34 N	21 26 W	Sept. 29	Noon, 30	do.	29.39	ESE	N, 10	NNW	—, 11	NNW-NNW.
NORTH PACIFIC OCEAN													
Pres. Harrison, Am. S. S.	San Francisco	Kobe	29 14 N	177 50 W	Sept. 2	11 a., 2	Sept. 2	29.05	ESE	NE, 11	NNW	NE, 11	ESE-NE-N.
Do.	do.	do.	33 16 N	152 47 E	Sept. 8	4 a., 8	Sept. 8	29.38	SE	S, 12	SSW	SSW, 12	SE-S-SW.
San Diego Maru, Jap. M. S.	Kobe	San Francisco	41 50 N	169 35 W	Sept. 2	2 a., 4	Sept. 4	28.82	E	NW, 8	SW	W, 10	N-SW.
Tamaha, Br. S. S.	San Pedro	Dairen	46 54 N	166 20 W	Sept. 3	8 p., 4	Sept. 5	28.35	NE	S, 12	WSW	S, 12	SE-S.
Iwatesan Maru, Jap. S. S.	Yokohama	San Francisco	45 00 N	168 00 W	do.	7 a., 4	do.	28.12	NE	NW, 4	WSW	SW, 11	NNE-NW.
Satanta, Br. S. S.	Swatow	San Pedro	45 09 N	167 50 W	do.	7 a., 4	do.	28.23	ENE	ESE, 10	S	S, 12	E-ESE-SE.
Golden Star, Am. S. S.	Shanghai	San Francisco	48 35 N	173 15 W	Sept. 4	7 p., 5	do.	29.22	NE	N, 11	W	NNW, 11	NE-N-NW.
Akagisan Maru, Jap. M. S.	Olympia	Yokohama	51 06 N	175 27 W	do.	5 p., 4	Sept. 6	29.63	N	NNW, 8	NW	N, 9	N-NW.
Olympia Maru, Jap. M. S.	Yokohama	Seattle	39 16 N	149 13 E	Sept. 8	Noon, 9	Sept. 9	28.98	NW	WSW, 9	SW	WSW, 9	Steady.
Ayaha Maru, Jap. S. S.	Milke	Victoria	40 45 N	150 50 E	do.	7 p., 8	do.	29.23	ENE	ENE, 11	E	ENE, 11	2 pts.
Mojave, Am. S. S.	Yokohama	San Pedro	36 56 N	146 12 E	Sept. 6	3 a., 8	Sept. 10	29.42	NE	NNE, 10	W	W, 11	NE-N.
Do.	do.	do.	44 25 N	173 02 W	Sept. 14	6 p., 16	Sept. 18	29.88	NE	N, 10	NNW	NNE, 10	NE-NNE.
Ayaha Maru, Jap. S. S.	Milke	Victoria	50 35 N	158 52 W	Sept. 17	4 a., 18	do.	29.13	NNE	NW, 10	NW	N, 10	1 pt.
Tecumseh, Br. S. S.	Nagasaki	San Pedro	46 29 N	148 09 W	do.	2 a., 18	do.	29.52	S	S, 8	SSW	S, 8	Steady.
Hakonesan Maru, Jap. M. S.	Portland	Yokohama	49 34 N	174 18 E	Sept. 20	6 p., 20	Sept. 21	29.48	SSE	SSW, 8	WSW	S, 8	S-SW.
Do.	do.	do.	41 55 N	150 30 E	Sept. 23	8 a., 24	Sept. 24	29.83	SSE	SSE, 8	N	SSE, 8	SSE-NW.
Golden Dragon, Am. S. S.	San Francisco	Otaru	50 40 N	169 50 W	Sept. 20	4 p., 20	Sept. 21	29.50	SSE	SSE, 8	NW	SSE, 9	SW-SSE.
Do.	do.	do.	50 15 N	179 30 W	Sept. 23	6 a., 23	Sept. 24	29.73	NNE	NE, 8	ENE	NE, 8	2 pts.
Shabonee, Br. S. S.	Shanghai	San Pedro	39 18 N	173 10 E	Sept. 25	4 p., 25	Sept. 25	29.64	ESE	E, 10	SE	E, 10	NE-SE.
Pres. Grant, Am. S. S.	Seattle	Yokohama	52 21 N	163 10 W	Sept. 24	6 p., 24	do.	29.63	W	W, 6	NW	NW, 9	W-NW.
Shiraha Maru, Jap. S. S.	Milke	Puget Sound	50 40 N	145 20 W	Sept. 25	10 p., 25	Sept. 27	28.74	SSE	S, —	W	NW, 10	SW-S-NW.
San Marcos, Am. S. S.	San Pedro	Balboa	17 43 N	102 42 W	Sept. 25	5 a., 26	Sept. 26	29.88	NNW	ESE, —	SW	ESE, 9	NNW-ESE.
Starr, Am. S. S.	Seward	Bristol Bay	59 36 N	144 03 W	Sept. 25	8 p., 26	Sept. 28	29.06	NE	NE, —	SE	NE, 9	—
Admiral Watson, Am. S. S.	Seattle	Kodiak	59 38 N	142 03 W	Sept. 29	6 a., 29	Sept. 30	29.02	E	N, —	E	N, 9	E-NE-N.
INDIAN OCEAN													
Brookwood, Br. S. S.	Mauritius	Port Kembla	36 54 S	122 19 E	Sept. 14	Noon, 15	Sept. 15	29.38	NNE	NNW, 8	NNW	NNE, 9	NNW-WNW.